

## TRANSCEIVER SYSTEM FOR PORTABLE USE

This invention relates to personal portable transceiver system especially for persons needing hands free operation due to driving, work, walking and carrying things etc.

Having some health problems due to air pollution etc., the inventor has been experimenting for years making portable air purifiers and other portable devices. By doing so, he also gradually developed special means for comfortable carrying of heavy combinations on user's chest and for easy operation of such combinations at various angles and distances required by different situations of everyday life. Transceivers, mobile phones and PCs on the market can be put in brief cases, bags, on belts and in pockets, but the inventor found that no such apparatus on the market offered satisfactory adjustability regarding positioning means.

To meet the need for hands free transceivers or mobile phones, there are some devices available. However, most have the common disadvantage that wires and components obstruct operators movements and are too quickly torn. A loudspeaker on the dashboard of a car is too often subdued by noisy traffic etc.

Not yet ready for sale on the market is the Swedish so-called "blue tooth" T28 World Ericsson mobile phone. According to last brochures in March 2000, it consists of a mobile phone to be put in a user's pocket or belt and a transceiver on the user's ear having no wires between the two components. It is a step forward, but problems arise when users for instance are exercising or doing work requiring vigorous body movements. The component to be put on the user's ear is likely to fall off because it cannot be tightened satisfactorily to the ear. "T28 World" only has a flexible fastening device for user's ear. A microphone arrangement on the user's cheek cannot be folded back on the ear and will consequently be too disturbing for all day use. It also feels somewhat uncomfortable to have components in pockets or on a belt. Especially when sitting down often or moving around in crowded places and narrow rooms there is a risk of losing or damaging the apparatus.

According to the present invention, there is provided personal portable transceiver system comprising:

A unit arranged to contain a wireless transmitter, a wireless receiver, a keyboard, a display, an antenna, a microphone, a listening device/loudspeaker, characterized in that said system is having special carrying means adjustable for being positioned entirely and firmly on the middle of the chest of the user, respectively on the ear of the user, optionally on both the chest and on the ear at the same time when the ear bow is used only as a receiver of sound from the chest apparatus, said system thereby facilitating hands-free operation when needed, said system also characterized by having means for moving some components like keyboard, display, microphones etc. to a more protruding and suitable angle, distance and stable position for easy operation by the user. Optionally also arranged to contain a portable, adjustable air conditioner, a flashlight, a regular radio, things for everyday use, remote control of other things etc. The transceiver on the chest of the user may also be combined with things like a small PC, TV, a magnifying glass for display enlargement, a transmitter of sound to the user's ear to avoid wires, a folding small desk, tray, remote control for a larger PC, larger TV, heating, lights, ventilation, robots etc. To facilitate hands-free use, the above mentioned components may be activated by user's voice or by touching symbols on the display of the apparatus. A good portable TV picture depends very much on where the portable TV is positioned. A pile of books under the TV might solve the problem, but are not always available. The positioning mechanism facilitates hands free use of the small portable TV almost everywhere. A suitable, stable position for satisfying picture quality is usually quickly reached. To meet user's varying needs and situations of everyday life, the system described here have a set of interchangeable components. Consequently, this system preferably includes:

- A. A transceiver on the middle of the user's chest having adjustable means for carrying, operation and accessories and a receiver on user's ear, which by adjustable means may be tightened for a stable and comfortable use on one or both of user's ears.

- B. For occasional light weight use in special situations like repair work under a car or when being in the bath room etc.: A complete lightweight transceiver or mobile phone, which by adjustable means may be tightened for a stable and comfortable use on user's ear.
- C. When driving a car, some might prefer a complete transceiver only positioned on user's chest, having a loudspeaker and microphone and adjustable means for carrying, operation and accessories.

The apparatus in accordance with the invention is hereby described more closely by referring to exemplary embodiments thereof and with reference to the enclosed drawings wherein:

The fresh air transceiver may be operated by keyboard (30) or voice activated. Fig. 1 shows: <sup>E.g.</sup> (Scale 1:1 up to scale 1:2).

Ball shaped, adjustable fan casing for wind direction (1).

Fan (32), electromotor (33), elastic noise reducing material (34), fan inlet ring (35).

Friction adjustment ring (12) (+friction seal ring (17) when needed).

Compartment (2) for <sup>color (or black/white)</sup> hands free low radiation picture phone, PC, TV, alarm and picture surveillance system etc., Antenna (13), protruding fastening means (6) <sup>or by magnet in apparatus</sup>.

listening means (4) allowing wireless transmission to adjustable ear bow transceiver (21), <sup>optionally extra</sup> loudspeaker (18), vertical strap (22) for stabilizing position of apparatus, folding microphone (5), <sup>rectangular</sup> dust filter (8), lid for batteries, active coal filter (9), <sup>and regulator</sup> braces (7) arranged to enable user

to carry heavy combinations without discomfort, light (14), radio (15), compartment (16) <sup>E.g.</sup> for beeper for hearing/tracking (optional) e.g. when apparatus lost/stolen, rechargeable battery (3), <sup>E.g. by the arm pit:</sup> rubber band, socket for wire (11) for power/recharging battery, lower belt (10), <sup>velcro place or</sup> tuckie (105).

keyboard for mobile phone (19) in retracted position, spring (28), band for keeping braces/straps in position below chin (20) with or without apparatus. Magnifying glass (23) adjustable <sup>E.g.</sup> 6cm x 6cm, for seeing keyboard, display, TV, PC etc. more easily (optional).

Fastening pin (43) for <sup>series</sup> Magnifying glass may also be fastened to detachable part of apparatus when using it on a table.

on user's lap etc. making ~~Small TV-picture, PC-picture,~~ mobile phone picture etc. look larger. The display may on

some models be tilted upwards from apparatus to facilitate viewing. The apparatus may also have a loudspeaking function (18) for phone conversations etc. Joints and movable arms (24) may

include springs, steel balls or rubber discs, grooves, hydraulics etc. to create friction and adjustability. Movable grating (29).

Water tight protecting case/cover with transparent cover (optional) over keyboard (preferably) and openings for air outlet, plugs.

Microphone (5). ~~(Folding cover or mic outside cover with a protecting cap or microphone stick as a prelongation of the listening means)~~ <sup>Movable arms</sup> Angle regulator (24) for quicker and easier observation of keyboard (30), display (31) or by hydraulics or other fastening arrangement offering varying angles, distances etc. from the user. Color display for functions above. Optionally also camera included. Knob (25) for air stream direction.

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PORTABLE AIR CONDITIONER COMBINED WITH TRANSCIVER ETC.

Protruding chest pads or pockets (26) stabilizing apparatus  
 and making apparatus look less protruding. Battery charging shoes (27).

(30) Keyboard may optionally be remote control for larger TV,  
 larger PC, larger TV/PC combinations, future self moving means  
 like lawn mowers, vacuum cleaners, window cleaners, food servers,  
 musical instruments, heating ovens, garage doors, house doors,  
 venetian blinds, curtains, kitchen appliances, lamps, robots,  
 ventilation and for other means suitable for remote control.  
 Keyboard (30) also for calculator and for programming voice  
 activation. Extra spring (36) on one side when needed.  
 Apparatus may also function as a future guide for drivers, seamen,  
 tourists, hikers in rural areas etc. by being linked to  
 satellite navigation systems or other systems facilitating  
 travelling. By programming or telling apparatus destination  
 and position, drivers may get instructions through the ear bow (21)  
 whether to turn left, right or go straight ahead when driving  
 in large towns. A good central administration of such a system  
 will counteract traffic jams and facilitate a much quicker and  
 better distribution of traffic on the roads.

For tourists the voice activated apparatus may also function as  
 a translator. Languages spoken to the users may in the future  
 quickly be translated to the user's language through the ear bows  
 without using dictionaries.

Small TV cameras or detectors/sensors may be mounted by the rear  
 and front bumpers of vehicles and thereby transmit information  
 regarding distance to obstacles and show it on the display (31)  
 for easier parking and driving. Other cameras in the vehicle  
 may be used for surveillance when drivers leave their car and  
 want to see and listen to make sure that nothing is stolen.

Similar surveillance of home, cabin, boat, office etc.

A world wide telephone directory information system may also be  
 available through this apparatus. Ring (44) to be fastened on a  
 fastening hook (37). <sup>Angle regulator by</sup> adjustment screw (39) for movable arms (24).

Rubber/frictional portion (40). Fan speed regulator (41) <sup>optionally</sup> ~~motor~~ <sup>motor</sup> or  
 holes (42) for angle adjustment of apparatus in protruded position.

05936664-010202



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